

I claim:

1. A mouse pointing device comprising:  
a housing; and,  
a mechanism disposed within the housing and movable over a gradient having a  
5 plurality of positions uniquely varying in intensity level of a first color on a first axis  
and uniquely varying in intensity level of a second color on a second axis,  
wherein the mechanism detects the intensity level of the first color and the  
intensity level of the second color of the position underneath the mechanism.
- 10 2. The mouse pointing device of claim 1, further comprising a light source  
disposed within the housing to illuminate the position underneath the mechanism.
3. The mouse pointing device of claim 2, wherein the light source comprises a  
light-emitting diode (LED).
- 15 4. The mouse pointing device of claim 1, wherein the mechanism comprises a  
sensor to detect the intensity level of the first color underneath the mechanism and the  
intensity level of the second color underneath the mechanism.
- 20 5. The mouse pointing device of claim 1, wherein the mechanism comprises:  
a first sensor to detect the intensity level of the first color of the position  
underneath the mechanism; and,

a second sensor to detect the intensity level of the second color of the position underneath the mechanism.

6. The mouse pointing device of claim 5, wherein the first sensor includes a color filter matching the first color, and the second sensor includes a color filter matching the second color.

7. A computerized system comprising:  
a computer having at least a processor and a memory; and,  
a mouse pointing device positionable over a surface having a plurality of uniquely coded positions, the device conveying to the computer the uniquely coded position underneath the mouse.

8. A mouse pointing device comprising a mechanism movable over a surface having a plurality of uniquely coded positions to detect the uniquely coded position underneath the mechanism.

9. A joystick pointing device comprising:  
a movable control stick;  
a first gradient having a plurality of positions uniquely varying in intensity level, the first gradient operatively coupled to the control stick such that movement of the control stick on a first axis causes corresponding movement of the first gradient;

a fixed first sensor positioned over the first gradient to detect the intensity level of the position underneath the first sensor;

a second gradient having a plurality of positions uniquely varying in intensity level, the second gradient operatively coupled to the control stick such that movement of the control stick on a second axis causes corresponding movement of the second gradient; and,

a fixed second sensor positioned over the second gradient to detect the intensity level of the position underneath the second sensor.

10. The joystick pointing device of claim 9, further comprising:

a fixed first light source positioned over the first gradient to illuminate the position underneath the first sensor; and,

a fixed second light source positioned over the second gradient to illuminate the position underneath the second sensor.

11. A joystick pointing device comprising:

a movable control stick;

a convex dome mounted to an end of the movable control stick, a bottom surface of the convex dome having a gradient having a plurality of positions uniquely varying in intensity level of a first color on a first axis and uniquely varying in intensity level of a second color on a second axis;

a first sensor positioned under the bottom surface of the convex dome to detect

the intensity level of the first color of the position above the first sensor; and,

a second sensor positioned over the bottom surface of the convex dome to detect the intensity level of the second color of the position above the second sensor.

5 12. The joystick pointing device of claim 11, further comprising a light source to illuminate the position above the first sensor and the position above the second sensor.

13. A joystick pointing device comprising:

a movable control stick;

10 a mechanism mounted to an end of the movable control stick; and,

a concave dome positioned underneath the mechanism, a top surface of the concave dome having a gradient having a plurality of positions uniquely varying in intensity level of a first color on a first axis and uniquely varying in intensity level of a second color on a second axis,

15 wherein the mechanism comprises:

a first sensor positioned above the top surface of the concave dome to detect the intensity level of the first color of the position underneath the first sensor; and,

20 a second sensor positioned above the top surface of the concave dome to detect the intensity level of the second color of the position underneath the second sensor.

14. The joystick pointing device of claim 13, wherein the mechanism further comprises a light source to illuminate the position underneath the first sensor and the position underneath the second sensor.

5 15. A computerized system comprising:  
a computer having at least a processor and a memory; and,  
a joystick pointing device having a movable control stick absolutely positionable  
via detection of one of a plurality of uniquely coded positions for each of at least one  
surface, the device conveying to the computer the uniquely coded position of each  
10 surface.

16. A pointing device comprising:  
a housing; and,  
a sensor disposed within the housing and positionable over a first transposed  
15 over a second gradient, each gradient having a plurality of positions uniquely varying in  
intensity level, the sensor detecting the intensity level of the first gradient and the  
intensity level of the second gradient of the position underneath the sensor.

17. A pointing device comprising:  
20 a housing;  
a first sensor disposed within the housing and positionable over a first gradient  
having a plurality of positions uniquely varying in intensity level, the first sensor

detecting the intensity level of the position underneath the first sensor; and,

a second sensor disposed within the housing and positionable over a second gradient having a plurality of positions uniquely varying in intensity level, the second sensor detecting the intensity level of the position underneath the second sensor.

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18. The pointing device of claim 17, further comprising:

a first light source disposed within the housing to illuminate the position underneath the first sensor; and,

a second light source disposed within the housing to illuminate the position underneath the second sensor.

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19. The pointing device of claim 18, wherein each of the first and second light sources comprises a light-emitting diode (LED).

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20. The pointing device of claim 17, further comprising a light source disposed within the housing to illuminate the position underneath the first sensor and the position underneath the second sensor.

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21. The pointing device of claim 17, wherein the first gradient is transposed over the second gradient.

22. The pointing device of claim 17, wherein the position underneath the first sensor

is substantially coincident to the position underneath the second sensor.

23. The pointing device of claim 17, wherein each gradient is a color gradient such that the plurality of positions uniquely vary in intensity level of color.

24. The pointing device of claim 23, wherein the first gradient is a color gradient of a first color and the second gradient is a color gradient of a second color.

25. The pointing device of claim 23, wherein the first sensor includes a color filter matching the first gradient and the second sensor includes a color filter matching the second gradient.

26. The pointing device of claim 17, wherein each gradient is a gray-scale gradient such that the plurality of positions uniquely vary in shades of grade.

27. The pointing device of claim 17, wherein the pointing device is a joystick.

28. A pointing device comprising:

a housing;

a first sensor disposed within the housing and positionable over a first surface having a plurality of uniquely coded positions to detect the uniquely coded position underneath the first sensor; and,

a second sensor disposed within the housing and positionable over a second surface having a plurality of uniquely coded positions to detect the uniquely coded position underneath the second sensor.

- 5      29.      A mouse pad for an absolutely positionable mouse pointing device comprising:  
a first gradient uniquely varying in intensity level of a first color on a first axis;  
and,  
a second gradient transposed over the first gradient and uniquely varying in  
intensity level of a second color on a second axis perpendicular to the first axis.

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